IEPA-BOW-Peoria

Inspection Report

Subject: FULTON COUNTY (Vermont)
-Black Gold Ranch & Feedlot
Livestock Manure Release
IEMA Incident #: H-2013-0491
CAFO Inspection

To: DWPC/FOS & RU

From: Eric O. Ackerman DWPC-FOS, Peoria Region

Date: May 2, 2013

On the above date I responded to a report of pools of liquid manure on a field and in waterways in an agricultural field in rural Fulton County. (See the attached IEMA Incident Report#: H-2013-0491.) At approximately 3:00 pm I arrived in rural Fulton County near the site. [redacted], contacted during the field visit as well as Steve Foglesong, facility owner and Abe Belleville, an employee. Refer to the attached photographs and Figures 1 through 4 for a description of the area. (Video photography is also available.) Weather conditions were overcast with rain forecast for later in the day. A light rainfall event reportedly occurred in the area during the morning hours. However, field conditions were relatively dry with a temperature near 58^0F. Wind was out of the northwest. Surface liquid samples were collected at the site at 3 locations with laboratory results attached and summarized in Table 1 of this report. (Additional information regarding the cattle confinement facility of Black Gold Ranch & Feedlot is available in an April 25, 2012 CAFO Report.) The following paragraphs provide details of the field visit.

Manure Application Field Location

The manure application field is located approximately 2.25 miles northwest of Astoria. The legal description for this location is in the SW ¼, Section 10, T3N, R1E (Astoria Township) in Fulton County. (GPS coordinates: latitude 40.252, longitude -90.393). This field is approximately 1.25 miles south of the large cattle confinement barn of Black Gold Ranch & Feedlot. The manure application field appears to be in the watershed of the South Branch Otter Creek. [South Branch Otter Creek flows to Otter Creek which flows into the Illinois River. Stream Code: DID]

Manure Application Field Observations

South Portion of Field
I approached the manure application field from the south. A strong livestock waste odor was noted at a distance of about ½ mile southeast of the manure field. The manure application field is bordered on the west by a gravel road (North Meadowlark Road). A small pasture area and stream exist just south of the manure field. The field is estimated to be approximately 40 acres in size. I observed a significant accumulation of liquid cattle manure on the surface of the application field. It was obvious that liquid cattle manure had recently been applied to this field. Injection channels several inches deep existed in the surface of the field.

A very strong and offensive livestock waste odor existed in this field. As seen in the photographs the manure extended over a large portion of the field and mostly on the east half of the field. As seen in Figures 2, 3 & 4, a small waterway exists in a north-south direction in the southern half of the manure field. This waterway drains south, through the manure field and passes through a fence before discharging onto the neighboring pasture to the south. (See photographs.) I observed and sampled liquid cattle manure in this north – south waterway. Liquid cattle manure did not appear to be flowing off the south edge of the application field at the time of my inspection. However, it was obvious from the volume of livestock waste impounded at the border, and the field slope, that manure would drain off the field in a rainfall event. It was also apparent from the accumulation of field debris at the base of the fence that surface runoff had recently occurred from the manure field. (See photographs.)

An excessive amount of liquid cattle manure was applied to this field. The quantity of livestock waste applied to this field exceeded a practical limit. The volume of waste applied exceeded the existing soils ability to absorb and assimilate the liquid.

North Portion of Field
The north portion of the manure application field was also examined. This field is bordered on the northeast by a small stream that flows to the east. As seen in the photographs a significant volume of liquid manure existed on the surface of the field. I observed a manure runoff channel in the north portion of the field. This channel drained to the north and was conveying liquid cattle manure off the surface of the application field and into the small stream on the north. (See photographs.) This stream is an unnamed tributary to South Branch Otter Creek. Liquid samples were collected as described below. An excessive amount of liquid cattle manure was applied to this field. [A corrugated metal pipe (approximately 12-inch diameter) existed in the northeast corner of this field. The purpose of this pipe is to drain stormwater from the surface of the field to the small receiving stream on the north side of the field.]

Dead Livestock
A dead, partially decomposed beef cow was observed along the east side of the field and is shown in the attached photographs.

Discussion with Farm Representatives

Discussion with Abe Belleville
Following my initial observations of the application field, I proceeded to locate and contact farm representatives. Liquid manure was being applied to an agricultural field located about ¼ mile west of the subject field. This field is on the north side of East Meadowlark Road and is located in the NE ¼, Section 9, T3N, R1E (Astoria Township) in Fulton County. I proceeded to the field and at 4:45 pm contacted Abe Belleville, an employee of Black Gold Ranch & Feedlot. Mr. Belleville was operating manure injection/dragline equipment, land applying liquid cattle manure. (See photographs and video.) Liquid manure was being pumped from the manure storage pit beneath the cattle confinement barn to the application equipment in the field. (According to the CNMP, the manure storage pit has a capacity of approximately 6.7 million gallons.) Mr. Belleville indicated that they were currently applying manure at a rate of approximately 7,000 gallons per acre. He reported that they applied manure to the field I had just inspected (east of N. Meadowlark Road) on Tuesday, April 30, 2013. According to Mr. Belleville they applied manure at rate of about 7,000 gallons per acre. (The dragline is typically operated at a pressure of 150 – 160 psi.) He reported that manure was also applied to a field north of the current location on Wednesday, May 1, 2013. I

asked Mr. Belleville for records of the manure application. He indicated that he only provides verbal communication to Steve Foglesong regarding manure application and does not himself keep written records.

[Monday, April 29, 2013 was apparently the first day this year that Black Gold Ranch & Feedlot pumped cattle waste out of the large storage pit beneath the total confinement barn.]

Rain was reportedly forecast for later in the day and was predicted to set in for a few days with 2 inches of rain accumulated by Sunday, May 5, 2013.

I advised Mr. Belleville of the manure accumulation and runoff conditions observed in the manure application field located east of N. Meadowlark Road. I explained that the application was too heavy, manure had runoff into the small stream on the north side of the field, the impending rain will cause additional contaminated runoff and Black Gold Ranch & Feedlot needs to stop the discharge of manure to the stream.

Discussion with Steve Foglesong
At 4:55 pm Steve Foglesong arrived at the active application field on the north side of E. Meadowlark Road. After a brief discussion, Steve Foglesong and I proceeded back to the manure application field located on the east side of N. Meadowlark Road. Mr. Foglesong reported that this field, located in the SW ¼, Section 10, Astoria Township is approximately 38 acres in size. He indicated that they applied liquid cattle manure at a rate of about 8,000 gallons per acre to the field. According to Mr. Foglesong, this year is the first time they applied manure to the east half of this field. (He reported that the total confinement barn [manure source] currently housed approximately 3000 head of beef cattle.)
I advised Mr. Foglesong of the over application of manure and directed his attention to the liquid cattle manure in the small stream on the north side of the field. He was advised to stop the manure discharge, clean (remove the manure from) the stream and report the manure release. A copy of the "Reporting Requirements for Livestock Waste Releases in Illinois" was provided to him at the site.

Sample Collection
Three surface liquid samples were collected at the site on the above date with laboratory results summarized in the attached Table 1. The sample locations are described below.

Station S-2 (4:38 PM May 2, 2013):
Station S-2 identifies a liquid sample collected from the north end of the manure application field. This field is located on the east side of N. Meadowlark Road. The legal description is in the SW ¼, Section 10, T3N, R1E (Astoria Township) in Fulton County. The liquid was pooled on the surface of the field as seen in the photographs. Surface drainage from this area of the field flows to the north and into a small receiving stream. The liquid at Station S-2 was brown colored and very turbid. A black scum layer existed on the surface of the liquid. The liquid contained a very strong livestock waste odor.

Station S-3 (3:32 PM May 2, 2013):
Station S-3 identifies a liquid sample collected from the south end of the manure application field. (See Figure 4.) The field is located on the east side of N. Meadowlark Road. This sampling station is located along the north-south waterway in the field. The liquid was brown colored and very turbid. A black scum layer existed on the surface of the liquid. The liquid contained a very strong livestock waste odor.

Station C (3:53 PM May 2, 2013):

Station C is a liquid sample collected from the small receiving stream on the north side of the manure application field. This station is downstream from Station S-2. The liquid was brown colored and very turbid. A black scum layer existed on the surface of the liquid. The liquid contained a very strong livestock waste odor.

This report is submitted for your information.

Eric Ackerman

Eric O. Ackerman

Att: -Photographs
-Figures 1 - 4
-Laboratory Sheets (to be forwarded)
-Table 1 (to be forwarded)
-IEMA Incident #: H-2013-0491
-Business Card

cc: -Bud Bridgewater, BOW/FOS
-Roger Callaway, BOW/CAS
-Peoria Files

c:\livestock\blackgold\report_may_2_2013.doc

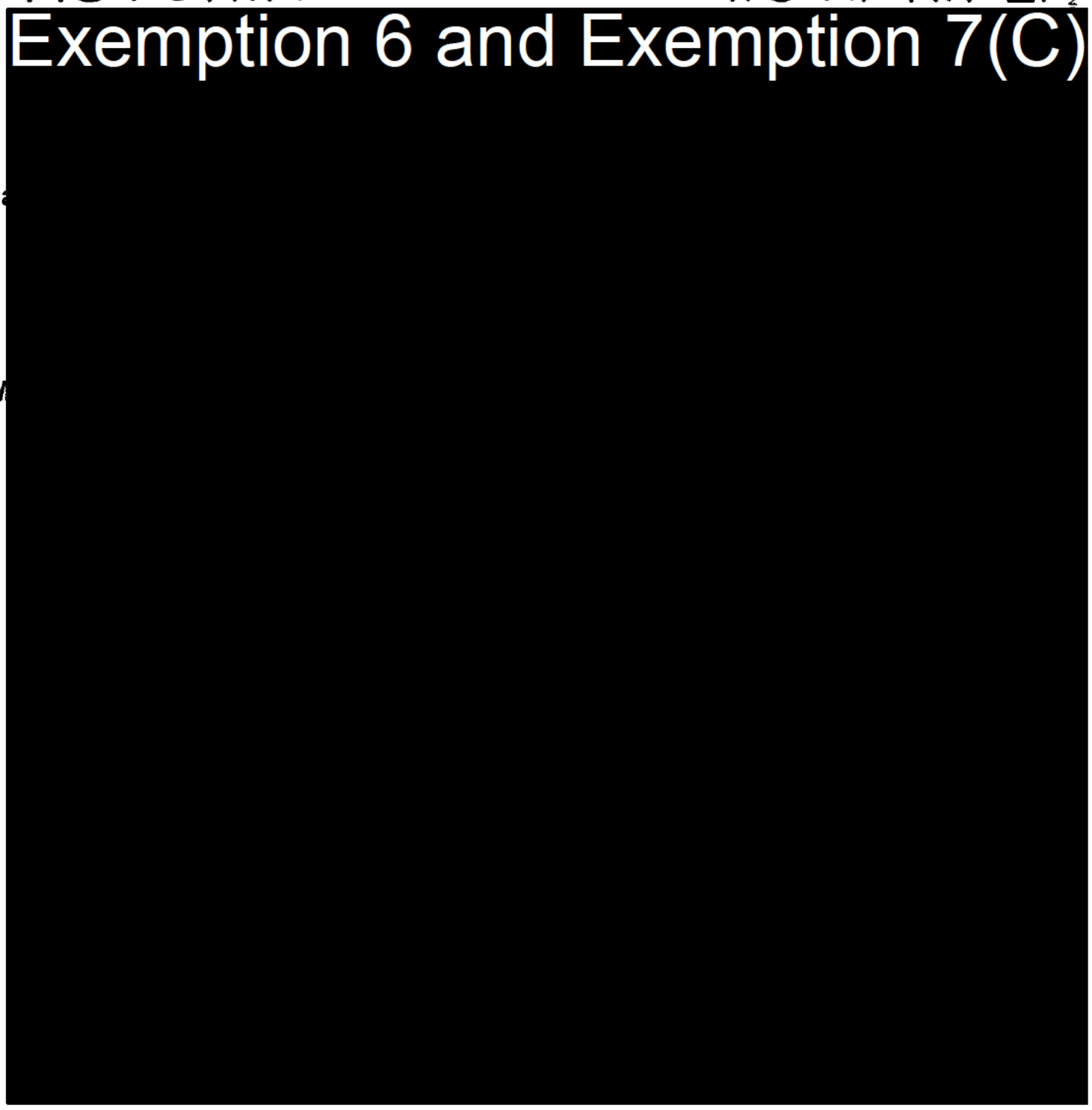

Figure 1. Location Map of Black Gold Ranch & Feedlot near Vermont in Fulton County on May 2, 2013.

USGS 295 km SW of Chicago, Illinois, United States 01 Jul 1979

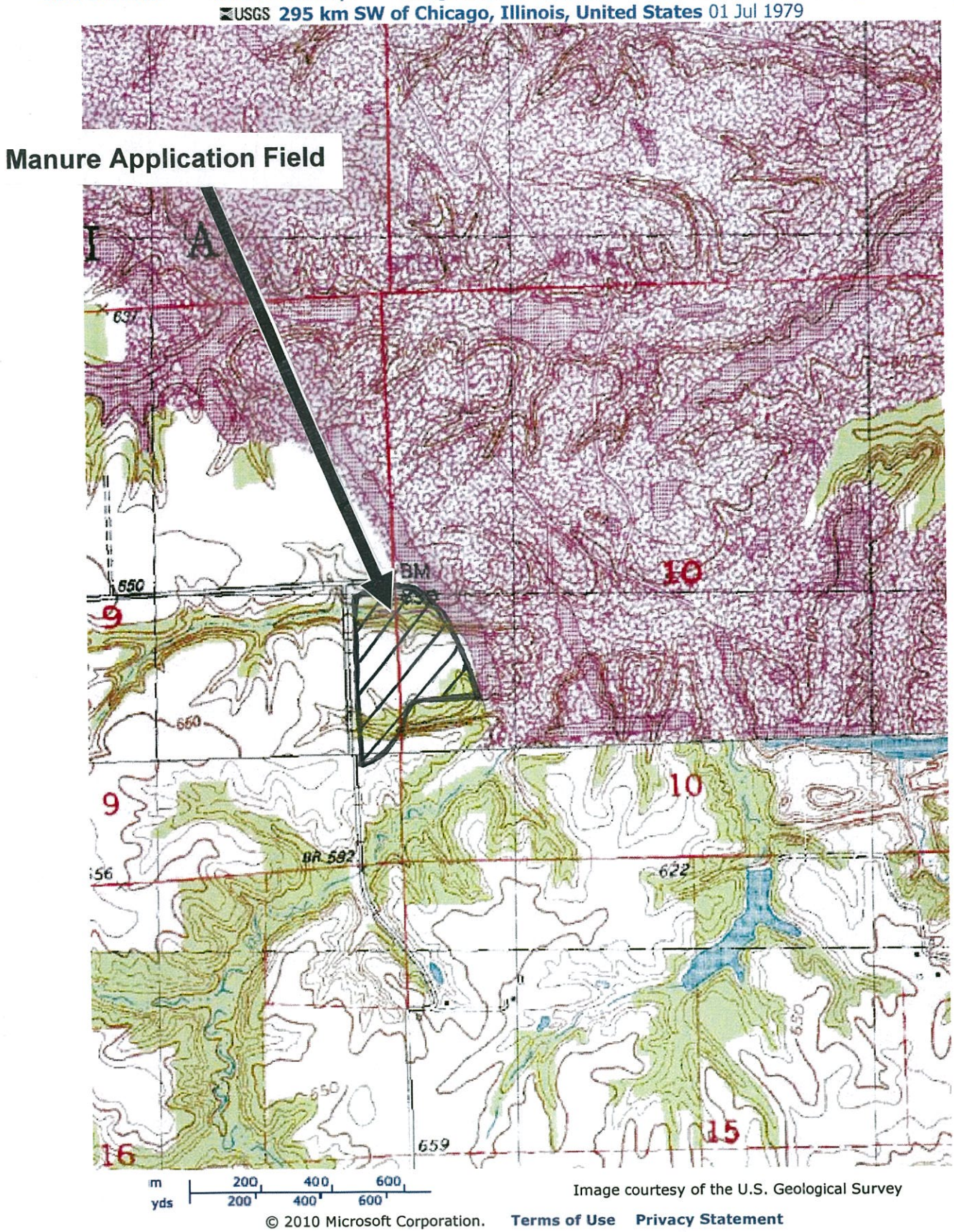

Image courtesy of the U.S. Geological Survey

Figure 2. USGS Topographical Map of Black Gold Ranch & Feedlot in Fulton County.

Send To Printer Back To MSR Maps Change to 11x17 Print Size Show Grid Lines Change to Landscape

USGS **295 km SW of Chicago, Illinois, United States** 05 Apr 1998

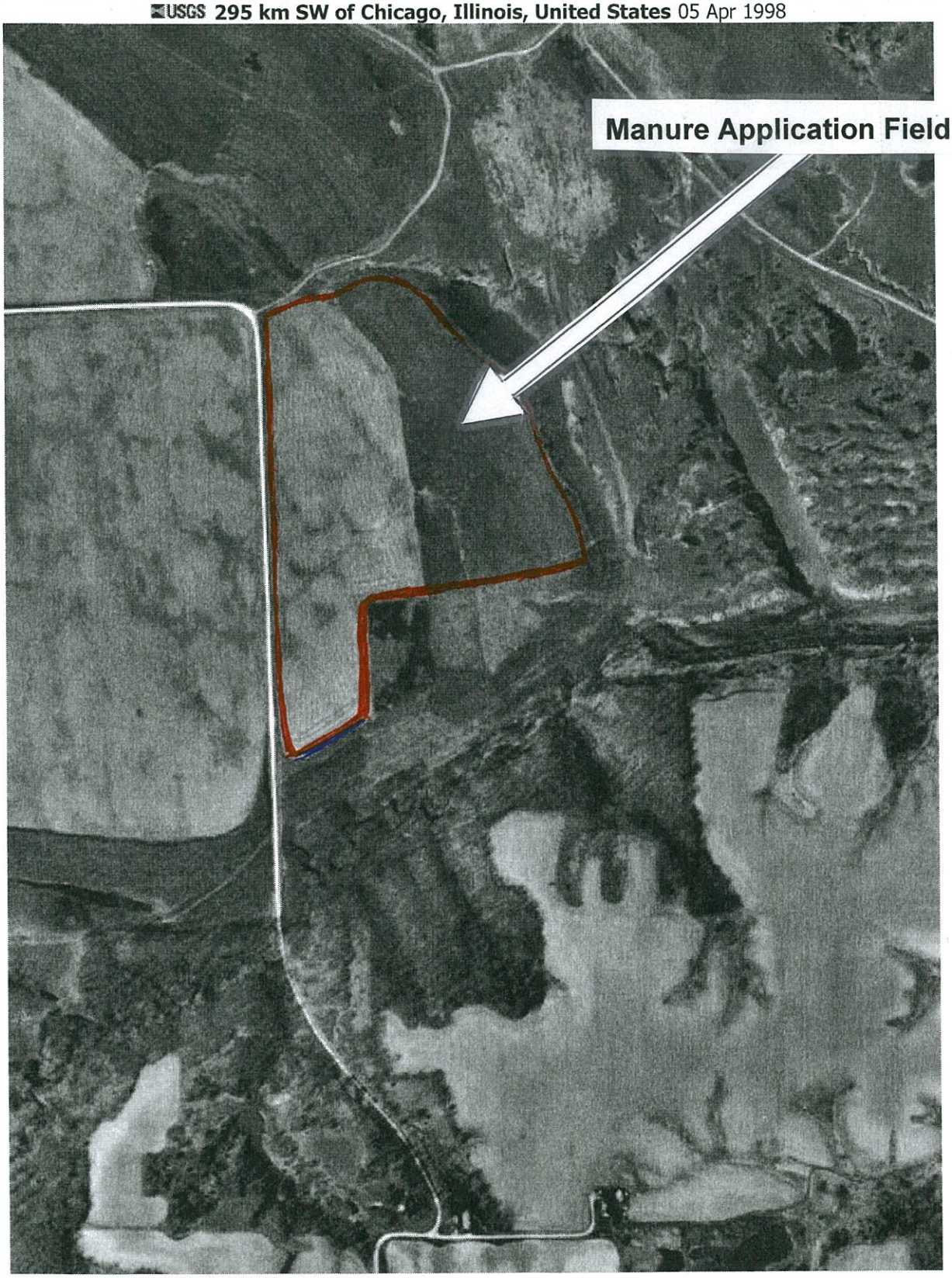

Image courtesy of the U.S. Geological Survey

Figure 3. Satellite Image of Black Gold Ranch & Feedlot Manure Application Field near Vermont in Fulton County.

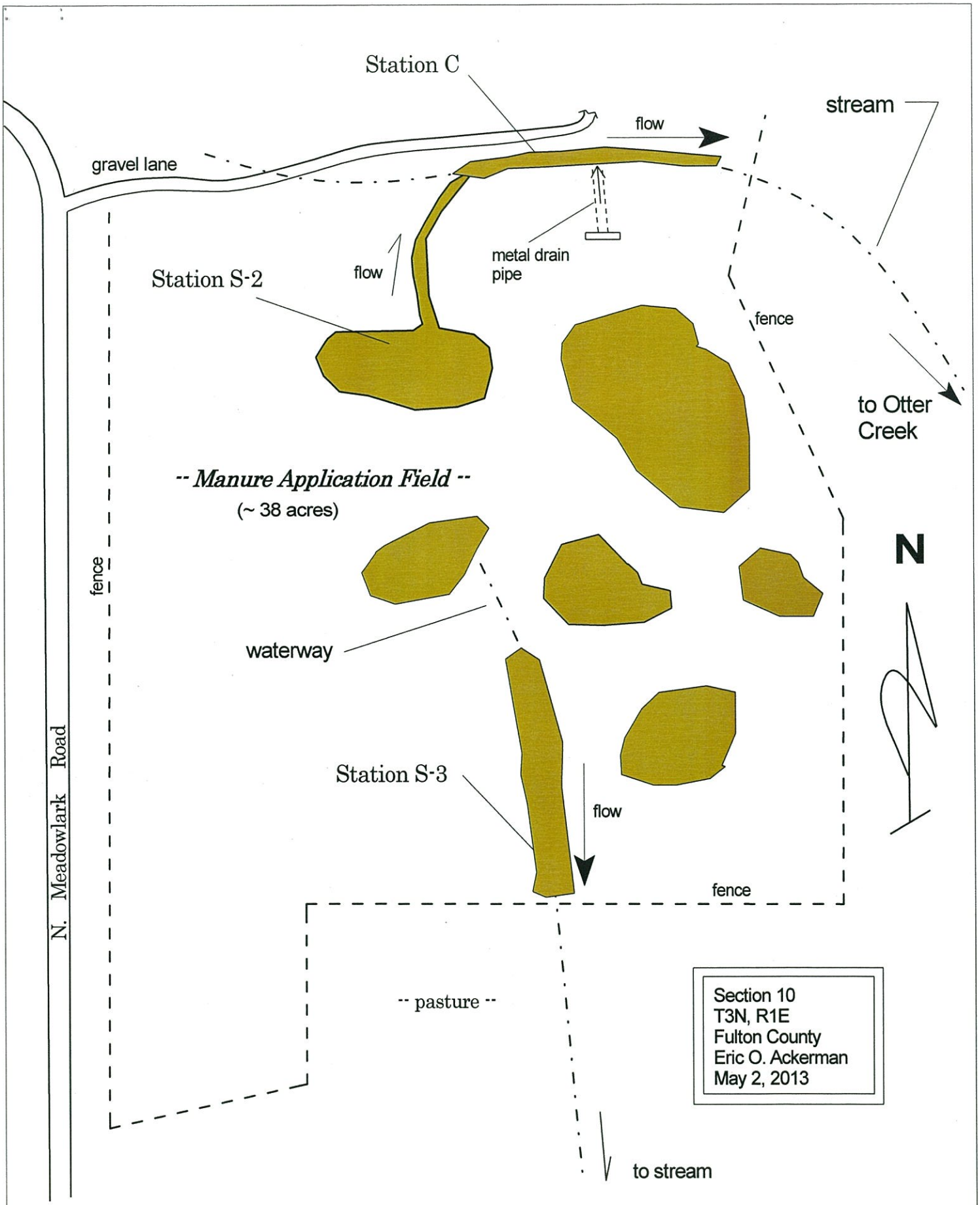

Figure 4. Sample Locations at Manure Application Field for Black Gold Ranch & Feedlot in Fulton County on May 2, 2013.

c:\livestock\blackgold\fig_4_blackgold_may_2_2013.cad iepa no scale

Hazardous Materials Incident Report

Incident #: H-2013-0491
Entered By: Watkins, Toni (IEMA) on 2013-05-02 17:21:12
Data Input Status: Closed
Leaking Underground Storage Tank (LUST): No

Caller:	Steve Foglesong		
Call Back #:	Exemption 6 and Exemption 7(C)		
Caller Represents:	Black Gold Ranch and Feed Lot		
Hazmat Incident Type:	Leak or spill		
INCIDENT LOCATION			
Incident Location:	E. of Miller Road, Astoria Township		
County:	Fulton	City:	Astoria
Primary IEMA Region:	6	Secondary IEMA Region:	
Full Address:	E. of Miller Road, Astoria Township, Astoria, IL		
Latitude:		Longitude:	
Milepost:		Sec:	
Twp.:		Range:	
Area Involved:			
Media or medium into which the release occurred:	Ground		

WEATHER INFORMATION			
Temp (deg F):		Wind Dir/Speed m.p.h:	

MATERIALS INVOLVED			
Material Name:	manure	Material Type:	Liquid
CHRIS Code:	unk	CAS #:	unk
UN/NA #:	unk		
Is this a 302(a) Extremely Hazardous Substance?	No		
Is this a RCRA Hazardous Waste?	No		
Is this a RCRA regulated facility?	No		
Container Type:	hose from confinement pit	Container Size:	unk
Amount Released:	unk susp. 200 gal.	Rate of Release/min:	
Duration of Release:	2 seconds		
Cause of Release:	field application		
Estimated Spill Extent:	10	Spill Extent Units:	Square yards

Date/Time Occured:	2013-05-01 17:00
Date/Time Discovered:	2013-05-02 17:00

Number Injured:	0	Where Taken:	
Number Killed:	0	# Evacuated:	0
On Scene Contact:	Steve Foglesong	On Scene Phone #:	Exemption 6 and Exemption 7(C)
Proper safety precautions to take as a result of the release, including evacuation: none			
Assistance needed from State Agencies: none			
Containment/Cleanup actions and plans: re applying on field			

Responsible Party:	Steve Foglesong
Contact Person:	Steve Foglesong
Callback Phone Number:	Exemption 6 and Exemption 7(C)
Facility Manager:	Steve Foglesong
Facility Manager Phone #:	Exemption 6 and Exemption 7(C)
Street Address:	Exemption 6 and Exemption 7(C)
City:	

Emergency Units Contacted	Contacted	On Scene	Agencies Contacted
ESDA			NONE
Fire			
Police			
Sheriff			
Other			

AGENCIES OR PERSONS NOTIFIED			
Agency	**Date/Time**	**Name of Person**	**Notification Action**
IEPA	2013-05-02 17:21	Yeric Yarrington	Contacted
IDOA	2013-05-02 17:31	Jerry Kirbach	Contacted
IEPA/NRTP/IDOA/Reg.6	2013-05-02 17:31		Report Sent

Narrative:
spill ran down into a ditch

Follow-Up Information:

BLACK GOLD

BG

RANCH & FEEDLOT

Steve Foglesong

Exemption 6 and Exemption 7(C)

Exemption 6 and Exemption 7(C)

Black Gold Ranch & Feedlot

Fulton County

May 2, 2013

(IEPA)

Photograph #1. A portion of the manure application field is seen. View is north.

Photograph #2. A portion of the manure application field is shown. View is north.

Black Gold Ranch & Feedlot
Fulton County
May 2, 2013

Photograph #3. The waterway in the south part of the manure application field is shown. View is north.

Photograph #4. Liquid cattle manure is seen on the surface of the field.

Black Gold Ranch & Feedlot
Fulton County
May 2, 2013

Photograph #5. Liquid cattle manure is seen in the waterway at the south portion of the field. View is north.

Photograph #6. Liquid cattle manure is seen in the waterway in the manure application field. View is west.

Black Gold Ranch & Feedlot
Fulton County
May 2, 2013

Photograph #7. Liquid cattle manure is seen draining through the waterway of the manure application field.

Photograph #8. Cattle manure is seen in waterway at south edge of manure application field. View is south.

Black Gold Ranch & Feedlot
Fulton County
May 2, 2013

Photograph #9. Liquid cattle manure is shown on the surface of the application field.

Photograph #10. A portion of the manure application field is shown. View is west.

Black Gold Ranch & Feedlot
Fulton County
May 2, 2013

Photograph #11. Cattle manure is shown on the surface of the application field.

Photograph #12. A portion of the manure application field is shown.

Black Gold Ranch & Feedlot
Fulton County
May 2, 2013

Photograph #13. An accumulation of liquid cattle manure is seen on the surface of the application field.

Photograph #14. Liquid cattle manure is shown on the surface of the field. View is west.

Black Gold Ranch & Feedlot
Fulton County
May 2, 2013

Photograph #15. The manure application field is shown.

Photograph #16. A portion of the manure application field is shown. View is southwest.

Black Gold Ranch & Feedlot
Fulton County
May 2, 2013

Photograph #17. A dead, partially decomposed, beef cow is seen near the application field.

Photograph #18. A partially decomposed beef cow is shown near the application field.

Black Gold Ranch & Feedlot
Fulton County
May 2, 2013

Photograph #19. Liquid cattle manure is seen in the receiving stream on the north side of the manure field.

Photograph #20. Liquid cattle manure is seen in the receiving stream on the north side of the manure field.

Black Gold Ranch & Feedlot
Fulton County
May 2, 2013

Photograph #21. Cattle manure is seen in the receiving stream at north side of field. View is east.

Photograph #22. Manure runoff is seen draining from the north side of the application field. View is south.

Black Gold Ranch & Feedlot
Fulton County
May 2, 2013

Photograph #23. Manure runoff is seen draining from the field into the receiving stream. View is north.

Photograph #24. A portion of the manure application field is shown. View is northeast.

Black Gold Ranch & Feedlot
Fulton County
May 2, 2013

Photograph #25. A portion of the manure application field is shown.

Photograph #26. Manure application equipment is shown operating at a nearby field. View is northwest.

Black Gold Ranch & Feedlot
Fulton County
May 2, 2013

Photograph #27. Dragline manure application equipment is seen at the edge of a field.

Photograph #28. Liquid cattle manure is being applied to cropland with dragline equipment.

Black Gold Ranch & Feedlot
Fulton County
May 2, 2013

Photograph #29. The surface of the field is shown immediately following manure application.

Photograph #30. Liquid cattle manure is being applied to cropland with dragline equipment.

Black Gold Ranch & Feedlot

Fulton County

Astoria, Illinois

Table 1.

Laboratory Analysis of Surface Water Samples Collected at Black Gold Ranch & Feedlot near Astoria on May 2, 2013.

Parameter (mg/l)	**Station S-2** (North end of manure application field)	**Station S-3** (South end of manure application field)	**Station C** (Receiving stream north of field)
Ammonia	29,300	34,100	3800
Nitrite + Nitrate	<0.1	30.3	<0.1
Phosphorus	856	894	901
*BOD	>4560	>4560	>4520
*pH (units)	7.0	7.0	7.5
*Fecal Coliform (cfu/100ml)	430	510	500

Note: * Holding time exceeded.

Lab Sheet Color: IEPA - DWPC - FOS - LAB SHEET S-2 Field ID No.: KG

09-Funding Code: WP02 10-Agency Routing PR 12-File Code: AGRI 13-Sample Type: X

15-Reporting: B 16-DID: Basin ____ County ____ Plant ____ 17-Sampling Program: AG

18-Facility/Sample Pt: BLACK GOLD CATTLE CO STATION S-2 19-Begin 130502 20-Begin 1638

Date: Y Y M M D D H H M M (24-hour clock)

23-Instructions to Lab: ____ 21-Collected by: EOA 22-Transported by: EOA

Composite Sample

Ending Date: 52 9F0 Y Y M M D D

Ending Time: 52 9F0 H H M M (24-hour clock)

03-Lab Parameter Group: EFF01

Additional Lab Parameters	Field Parameters	Results
Nitrate/Nitrite	501F0 Air Temp(°C)	
	502F0 Water Temp (°C)	
	504F0 Dissolved O_2	
Phosphorus	503F0 Conductance	
	500F0 pH	

27-Received by: ____ Date: ____ Y Y M M D D

Received by: ____ Date: ____ Y Y M M D D

Circle One: Effluent, Influent, Sludge, Stream, Process Flows, Cooling Water; Specials: WWTP, Other

Program: Ag-Livestock

~~NPDES No.~~ Station S-2

Receiving Stream Name: Otter Creek

Receiving Stream Conditions (velocity, etc):

RECEIVED PEORIA - DWPC JUL 18 2013 ENVIRONMENTAL PROTECTION AGENCY STATE OF ILLINOIS

Effluent Conditions:

Weather Conditions:

Comments & Unusual Conditions & Severity: (If applicable, Stamp-No Visible Problem This Visit")

Collected from north end of manure application field.

Remarks:

Sampling Techniques: liquid-grab

Mail To:

SE30159

FOR LABORATORY USE ONLY

LAB ID NO.

Sample Received By: EMB

Date Received: MAY 06 2013

Time Received: 0845 AM ____ PM

Lab Section:

Supervisor: cmc JUL 15 2013

4

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	BLACK GOLD CATTLE CO		
Project/Facility Number:	STATION S-2	Date Received :	05/06/13
Funding Code:	WP02	Visit Number:	
Trip ID:		Temperature C:	4.00
Client Sample ID:	**STATION S-2**	Lab Sample ID:	**SE30159-01**
Matrix:	Water	Date/Time Collected:	05/02/13 16:38
Sample Type:	Grab Field pH:	Collected By:	EOA

Biochemical Oxygen Demand, 5 day, by Standard Method 5210B

Method:	5210B	Prepared:	05/08/13 10:19
Units:	mg/L	Analyzed:	05/13/13 08:49

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
BOD 5DAY	**4560**	L, Q	2.00	

Nitrate-Nitrite, Colorimetric, Automated Cadmium by EPA Method 353.2

Method:	353.2	Prepared:	05/09/13 10:20
Units:	mg/L	Analyzed:	05/10/13 10:51

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Nitrogen, Nitrite (NO2) + Nitrate (	ND		0.100	

Nitrogen, Ammonia, Potentiometric, Ion Selective by EPA Method 350.3

Method:	350.3	Prepared:	05/20/13 08:42
Units:	mg/L	Analyzed:	05/22/13 11:18

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Ammonia as N	**29300**		0.10	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Celeste Crowley, Acting Laboratory Manager, at 217.782.9780.

Reported:
07/15/13 14:51

Illinois Environmental Protection Agency Laboratory
825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	**BLACK GOLD CATTLE CO**		
Project/Facility Number:	STATION S-2	Date Received :	05/06/13
Funding Code:	WP02	Visit Number:	
Trip ID:		Temperature C:	4.00

Notes and Definitions

Q	Maximum holding time exceeded.
L	Actual value not known, but known to be greater than value shown. Value shown is the highest acceptable level for quantitation. (For bacteria, result calculated as if the smallest filtration volume had a count of 200).
ND	Analyte NOT DETECTED at or above the reporting limit
*	Non-NELAP accredited

Due to the matrix of the sample, Total Suspended Solids (TSS) analysis could not be performed.
Matrix may have inhibited or negatively biased the Nitrate/Nitrite result, as straight runs were negative on colorimetric analysis, and dilutions, which are used as matrix interference/effects checks, did not correlate well.

Report Authorized by:

Sally Geyston

Sally Geyston
Sample Prep Unit Supervisor

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Reported:
07/15/13 14:51

Lab Sheet Color: IEPA - DWPC - FOS - LAB SHEET S-3 Field ID No.: VK

09-Funding Code: WP02 10-Agency Routing PR 12-File Code: AGRI 13-Sample Type: X

15-Reporting: B 16-DID: Basin ____ County ___ Plant __ 17-Sampling Program: AG

18-Facility/Sample Pt: BLACK GOLD CATTLE CO STATION S-3 19-Begin 130502 20-Begin 1532

Date: Y Y M M D D H H M M (24-hour clock)

23-Instructions to Lab: ____ 21-Collected by: EOA 22-Transported by: EOA

Composite Sample

Ending Date: 52 9F0 ____ (Y Y M M D D)

Ending Time: 52 9F0 ____ (H H M M, 24-hour clock)

03-Lab Parameter Group: EFE01

Additional Lab Parameters	Field Parameters	Results
Nitrate/Nitrite	501F0 Air Temp (°C)	
	502F0 Water Temp (°C)	
	504F0 Dissolved O_2	
Phosphorus	503F0 Conductance	
	500F0 pH	

27-Received by: Date: ____ (Y Y M M D D)

Received by: Date: ____ (Y Y M M D D)

Circle One: Effluent, Influent, Sludge, Stream, Process Flows, Cooling Water, Specials: WWTP, (Other)

Program: Ag-Livestock

~~NPDES No.~~ Station S-3

Receiving Stream Name: Otter Creek

Receiving Stream Conditions (velocity, etc):

Effluent Conditions:

RECEIVED PEORIA - DWPC JUL 18 2013 ENVIRONMENTAL PROTECTION AGENCY STATE OF ILLINOIS

Weather Conditions:

Comments & Unusual Conditions & Severity: (If applicable, Stamp-No Visible Problem This Visit'') Collected from south end of manure application field.

Remarks:

Sampling Techniques: liquid - grab

Mail To: SE30160

FOR LABORATORY USE ONLY 4

LAB ID NO.

Sample Received By: EMB

Date Received: MAY 06 2013

Time Received: 0845 AM ____ PM

Lab Section:

Supervisor: CMC JUL 15 2013

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	BLACK GOLD CATTLE CO		
Project/Facility Number:	STATION S-3	Date Received :	05/06/13
Funding Code:	WP02	Visit Number:	
Trip ID:		Temperature C:	4.00
Client Sample ID:	**STATION S-3**	Lab Sample ID:	**SE30160-01**
Matrix:	Water	Date/Time Collected:	05/02/13 15:32
Sample Type:	Grab Field pH:	Collected By:	EOA

Biochemical Oxygen Demand, 5 day, by Standard Method 5210B

Method:	5210B	Prepared:	05/08/13 10:19
Units:	mg/L	Analyzed:	05/13/13 08:49

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
BOD 5DAY	**4560**	L, Q	2.00	

Nitrate-Nitrite, Colorimetric, Automated Cadmium by EPA Method 353.2

Method:	353.2	Prepared:	05/07/13 13:04
Units:	mg/L	Analyzed:	05/07/13 15:17

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Nitrogen, Nitrite (NO2) + Nitrat	**30.3**		0.200	

Nitrogen, Ammonia, Potentiometric, Ion Selective by EPA Method 350.3

Method:	350.3	Prepared:	05/20/13 08:42
Units:	mg/L	Analyzed:	05/22/13 11:18

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Ammonia as N	**34100**		0.10	

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Reported:
07/15/13 14:51

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	BLACK GOLD CATTLE CO		
Project/Facility Number:	STATION S-3	Date Received :	05/06/13
Funding Code:	WP02	Visit Number:	
Trip ID:		Temperature C:	4.00

Notes and Definitions

Q	Maximum holding time exceeded.
L	Actual value not known, but known to be greater than value shown. Value shown is the highest acceptable level for quantitation. (For bacteria, result calculated as if the smallest filtration volume had a count of 200).
ND	Analyte NOT DETECTED at or above the reporting limit
*	Non-NELAP accredited

Due to the matrix of the sample, Total Suspended Solids (TSS) analysis could not be performed.
Matrix may have inhibited or negatively biased the Nitrate/Nitrite result, as straight runs were negative on colorimetric analysis, and dilutions, which are used as matrix interference/effects checks, did not correlate well.

Report Authorized by:

Sally Geyston

Sally Geyston
Sample Prep Unit Supervisor

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Reported:
07/15/13 14:51

Lab Sheet Color: IEPA - DWPC - FOS - LAB SHEET C Field ID No.: VG

09-Funding Code: WP02 10-Agency Routing PR 12-File Code: AGRI 13-Sample Type: X

15-Reporting: B 16-DID: Basin ____ County ____ Plant ____ 17-Sampling Program: AG

18-Facility/Sample Pt: BLACK GOLD CATTLE CO STATION C 19-Begin 130502 20-Begin 1553

Date: Y Y M M D D H H M M (24-hour clock)

23-Instructions to Lab: ____ 21-Collected by: EOA 22-Transported by: EOA

Composite Sample

Ending Date: 529F0 Y Y M M D D

Ending Time: 529F0 H H M M (24-hour clock)

03-Lab Parameter Group: EFF01

Additional Lab Parameters	Field Parameters	Results
Nitrate/ Nitrite	501F0 Air Temp(°C)	
	502F0 Water Temp (°C)	
	504F0 Dissolved O_2	
Phosphorus	503F0 Conductance	
	500F0 pH	

27-Received by: ____ Date: ____ Y Y M M D D

Received by: ____ Date: ____ Y Y M M D D

Circle One: Effluent, Influent, Sludge, Stream, Process Flows, Cooling Water, Specials: WWTP, Other

Program: Ag - Livestock

~~NPDES No.~~ Station C

Receiving Stream Name: Otter Creek

Receiving Stream Conditions (velocity, etc):

RECEIVED PEORIA - DWPC JUL 11 2013 ENVIRONMENTAL PROTECTION AGENCY STATE OF ILLINOIS

Effluent Conditions:

Weather Conditions:

Comments & Unusual Conditions & Severity: (If applicable, Stamp- No Visible Problem This Visit")

Collected from small stream/ channel north of manure application field.

Remarks:

Sampling Techniques: liquid - grab

Mail To:

SE30158

FOR LABORATORY USE ONLY 4

LAB ID NO.

Sample Received By: EMB

Date Received: MAY 06 2013

Time Received: 0845 AM ____ PM

Lab Section:

Supervisor: CMC JUN 24 2013

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	BLACK GOLD CATTLE CO		
Project/Facility Number:	STATION C	Date Received :	05/06/13
Funding Code:	WP02	Visit Number:	
Trip ID:		Temperature C:	4.00
Client Sample ID:	**STATION C**	Lab Sample ID:	**SE30158-01**
Matrix:	Water	Date/Time Collected:	05/02/13 15:53
Sample Type:	Grab	Field pH:	Collected By: EOA

pH

Method:	150.1	Prepared:	05/07/13 15:15
Units:	PH	Analyzed:	05/07/13 15:15

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Laboratory pH	7.5	Q	0.0	

Phosphorus, All Forms, Colorimetric, Ascorbic by EPA Method 365.3

Method:	365.3	Prepared:	05/09/13 12:54
Units:	mg/L	Analyzed:	05/13/13 09:34

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Phosphorus as P	901		0.100	

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Reported:
06/24/13 10:20

Illinois Environmental Protection Agency Laboratory
825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	**BLACK GOLD CATTLE CO**		
Project/Facility Number:	STATION C	Date Received :	05/06/13
Funding Code:	WP02	Visit Number:	
Trip ID:		Temperature C:	4.00

Notes and Definitions

Q	Maximum holding time exceeded.
L	Actual value not known, but known to be greater than value shown. Value shown is the highest acceptable level for quantitation. (For bacteria, result calculated as if the smallest filtration volume had a count of 200).
ND	Analyte NOT DETECTED at or above the reporting limit
*	Non-NELAP accredited

Due to the matrix of the sample, Total Suspended Solids (TSS) analysis could not be performed.
Matrix may have inhibited or negatively biased the Nitrate/Nitrite result, as straight runs were negative on colorimetric analysis, and dilutions, which are used as matrix interference/effects checks, did not correlate well.

Report Authorized by:

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Sample Prep Unit Supervisor

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Reported:
06/24/13 10:20

PDC Laboratories, Inc.
2231 W. Altorfer Drive • Peoria, IL 61615
(309) 692-9688 • (800) 752-6651 • FAX (309) 692-9689

NELAP ACCREDITED TNI LABORATORY

Illinois Environmental Protection Agency
5415 N University
Peoria, IL 61614
Attn: Eric Ackerman

Date Received: 05/06/13 12:00
Report Date: 05/13/13
Customer #: 234431

Laboratory Results

Sample No: **3050601-01**
Collect Date: **05/02/13 15:53**
Matrix: **Waste Water Grab**

Sample Description: STATION C

Parameters	Result	Qual	Prep Date	Analysis Date	Analyst	Method
Microbiology - PIA						
Fecal coliform bacteria	500 CFU/100 ml	H	05/06/13 13:30	05/06/13 13:30	KJB	SM 9222 D

Sample No: **3050601-02**
Collect Date: **05/02/13 16:38**
Matrix: **Waste Water Grab**

Sample Description: STATION S-2

Parameters	Result	Qual	Prep Date	Analysis Date	Analyst	Method
Microbiology - PIA						
Fecal coliform bacteria	430 CFU/100 ml	H	05/06/13 13:30	05/06/13 13:30	KJB	SM 9222 D

Sample No: **3050601-03**
Collect Date: **05/02/13 15:32**
Matrix: **Waste Water Grab**

Sample Description: STATION S-3

Parameters	Result	Qual	Prep Date	Analysis Date	Analyst	Method
Microbiology - PIA						
Fecal coliform bacteria	510 CFU/100 ml	H	05/06/13 13:30	05/06/13 13:30	KJB	SM 9222 D

5/13/13

PDC Laboratories, Inc.
2231 W. Altorfer Drive • Peoria, IL 61615
(309) 692-9688 • (800) 752-6651 • FAX (309) 692-9689

Illinois Environmental Protection Agency
5415 N University
Peoria, IL 61614
Attn: Eric Ackerman

Date Received: 05/06/13 12:00
Report Date: 05/13/13
Customer #: 234431

Laboratory Results

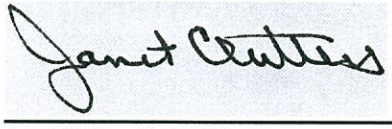
Notes

This report shall not be reproduced, except in full, without the written approval of the laboratory.

PDC Laboratories participates in the following accreditation/certification and proficiency programs at the following locations. Endorsement by Federal or State Governments or their agencies is not implied.

PIA PDC Laboratories - Peoria, IL
TNI Accreditation for Drinking Water, Wastewater, Hazardous and Solid Wastes Fields of Testing through IL EPA Lab No. 100230
Illinois Department of Public Health Bacteriological Analysis in Drinking Water Approved Laboratory Registry No. 17553
Drinking Water Certifications: Kansas (E-10338); Missouri (870); Wisconsin (998284430); Indiana (C-IL-040); Iowa (240)
Wastewater Certifications: Arkansas (88-0677); Wisconsin (998284430); Iowa (240); Kansas (E-10335)
Hazardous/Solid Waste Certifications; Arkansas (88-0677); Wisconsin (998284430); Iowa (240); Kansas (E-10335)
UST Certification; Iowa (240)
SPM PDC Laboratories - Springfield, MO
EPA DMR-QA Program
STL PDC Laboratories - St. Louis, MO
TNI Accreditation for Wastewater, Hazardous and Solid Wastes Fields of Testing through KS EPA Lab No. E-10389

H Test performed after the expiration of the appropriate regulatory/advisory maximum allowable hold time.



Certified by: Janet Clutters, Project Manager

PDC LABORATORIES, INC.
2231 WEST ALTORFER DRIVE
PEORIA, IL 61615

PHONE # 800-752-6651
FAX # 309-692-9689

CHAIN OF CUSTODY RECORD

State where samples collected ____________

ALL HIGHLIGHTED AREAS MUST BE COMPLETED BY CLIENT (PLEASE PRINT) - (SAMPLE ACCEPTANCE POLICY ON REVERSE)

(1) CLIENT: Illinois EPA (Arbor #3)
ADDRESS: 5407 N. University
CITY STATE ZIP: Peoria IL 61614
CONTACT PERSON: Eric Ackerman

PROJECT NUMBER: | P.O. NUMBER: | MEANS SHIPPED:
PHONE NUMBER: 693-5463 | FAX NUMBER: | DATE SHIPPED:
SAMPLER (PLEASE PRINT):
SAMPLER'S SIGNATURE: Eric Ackerman

MATRIX TYPES:
WW-WASTEWATER
DW-DRINKING WATER
GW-GROUND WATER
WWSL-SLUDGE
NAS-SOLID
LCHT-LEACHATE
OTHER: ______

(3) ANALYSIS REQUESTED: Fecal Coliform

(4) (FOR LAB USE ONLY)
LOGIN #: 3050601-3
LOGGED BY: NC
LAB PROJ. #:
TEMPLATE:
PROJ. MGR.:

(2) SAMPLE DESCRIPTION AS YOU WANT ON REPORT	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE GRAB	SAMPLE TYPE COMP	MATRIX TYPE	BOTTLE COUNT	Fecal Coliform	REMARKS
Station C	5/2/13	3:53PM	X		liquid		X	
Station S-2	5/2/13	4:38PM	X		liquid		X	
Station S-3	5/2/13	3:32PM	X		liquid		X	

(5) TURNAROUND TIME REQUESTED (PLEASE CIRCLE) NORMAL RUSH
(RUSH TAT IS SUBJECT TO PDC LABS APPROVAL AND SURCHARGE)
DATE RESULTS NEEDED
RUSH RESULTS VIA (PLEASE CIRCLE) FAX PHONE E-MAIL
FAX # PHONE # EMAIL ADDRESS

(6) *The sample temperature will be measured upon receipt at the lab. By initialing this area you request that the lab notify you, before proceeding with analysis, if the sample temperature is outside of the range of 0.1-6.0°C. By not initialing this area you allow the lab to proceed with analytical testing regardless of the sample temperature.* ______

(7) RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)	DATE / TIME
Eric Ackerman			
RELINQUISHED BY: (SIGNATURE)		RECEIVED BY: (SIGNATURE)	
RELINQUISHED BY: (SIGNATURE)		RECEIVED AT LAB BY: (SIGNATURE) [signature]	5/6/13 12:00

(8) COMMENTS: (FOR LAB USE ONLY)
SAMPLE TEMPERATURE UPON RECEIPT 2 °C
CHILL PROCESS STARTED PRIOR TO RECEIPT Y OR N
SAMPLE(S) RECEIVED ON ICE Y OR N
PROPER BOTTLES RECEIVED IN GOOD CONDITION Y OR N
BOTTLES FILLED WITH ADEQUATE VOLUME Y OR N
SAMPLES RECEIVED WITHIN HOLD TIME(S) Y OR N
(EXCLUDES TYPICAL FIELD PARAMETERS)
DATE AND TIME TAKEN FROM SAMPLE BOTTLE ______

Copies: white should accompany samples to PDC Labs. Yellow copy to be retained by the client.

PAGE ____ OF ____

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	BLACK GOLD CATTLE CO		
Project/Facility Number:	STATION S-2	Date Received :	05/06/13
Funding Code:	WP02	Visit Number:	
Trip ID:		Temperature C:	4.00
Client Sample ID:	**STATION S-2**	Lab Sample ID:	**SE30159-01**
Matrix:	Water	Date/Time Collected:	05/02/13 16:38
Sample Type:	Grab Field pH:	Collected By:	EOA

pH

Method:	150.1	Prepared:	05/07/13 15:15
Units:	PH	Analyzed:	05/07/13 15:15

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Laboratory pH	**7.0**	Q	0.0	

Phosphorus, All Forms, Colorimetric, Ascorbic by EPA Method 365.3

Method:	365.3	Prepared:	05/09/13 12:54
Units:	mg/L	Analyzed:	05/13/13 09:35

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Phosphorus as P	**856**		0.100	

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Reported:
07/15/13 14:51

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	BLACK GOLD CATTLE CO		
Project/Facility Number:	STATION S-3	Date Received :	05/06/13
Funding Code:	WP02	Visit Number:	
Trip ID:		Temperature C:	4.00
Client Sample ID:	**STATION S-3**	Lab Sample ID:	**SE30160-01**
Matrix:	Water	Date/Time Collected:	05/02/13 15:32
Sample Type:	Grab Field pH:	Collected By:	EOA

pH

Method:	150.1	Prepared:	05/07/13 15:15
Units:	PH	Analyzed:	05/07/13 15:15

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Laboratory pH	**7.0**	Q	0.0	

Phosphorus, All Forms, Colorimetric, Ascorbic by EPA Method 365.3

Method:	365.3	Prepared:	05/09/13 12:54
Units:	mg/L	Analyzed:	05/13/13 09:37

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Phosphorus as P	**894**		0.100	

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Reported:
07/15/13 14:51

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	BLACK GOLD CATTLE CO		
Project/Facility Number:	STATION C	Date Received :	05/06/13
Funding Code:	WP02	Visit Number:	
Trip ID:		Temperature C:	4.00
Client Sample ID:	**STATION C**	Lab Sample ID:	**SE30158-01**
Matrix:	Water	Date/Time Collected:	05/02/13 15:53
Sample Type:	Grab Field pH:	Collected By:	EOA

Biochemical Oxygen Demand, 5 day, by Standard Method 5210B

Method:	5210B	Prepared:	05/08/13 10:19
Units:	mg/L	Analyzed:	05/13/13 08:49

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
BOD 5DAY	**4520**	L, Q	2.00	

Nitrate-Nitrite, Colorimetric, Automated Cadmium by EPA Method 353.2

Method:	353.2	Prepared:	05/09/13 10:20
Units:	mg/L	Analyzed:	05/10/13 10:50

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Nitrogen, Nitrite (NO2) + Nitrate (	ND		0.100	

Nitrogen, Ammonia, Potentiometric, Ion Selective by EPA Method 350.3

Method:	350.3	Prepared:	05/23/13 15:39
Units:	mg/L	Analyzed:	05/23/13 15:39

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Ammonia as N	**3800**		1000	

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Reported:
06/24/13 10:20